

Remarks

Applicant respectfully requests that this Amendment After Final Action be admitted under 37 C.F.R. § 1.116.

Applicant submits that this Amendment presents claims in better form for consideration on appeal. Furthermore, applicant believes that consideration of this Amendment could lead to favorable action that would remove one or more issues for appeal.

Claims 3, 4, 8, 9, 12, and 20-22 have been amended. No claims have been canceled or added. Therefore, claims 3-13 and 20-22 are now presented for examination.

35 U.S.C. §112 Rejection

Claim 21 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant submits that claim 21 has been amended to appear in proper form for allowance. Applicant thereby respectfully requests that the 35 U.S.C. §112 rejection be withdrawn.

35 U.S.C. §102(b) Rejection

Claims 3-13 and 20-21 stand rejected under 35 U.S.C. §102(b) as being anticipated by Loechel (U.S. Patent No. 5,895,485). Applicant submits that the present claims are patentable over Loechel.

Loechel discloses a method for mirroring cache data from a first controller to an alternate controller in a data storage system, where the data storage system includes a host computer connected to the first controller and the alternate controller. According to the method, the first controller receives a write data request from a host computer that

includes data to be written by the first controller to a system drive. The first controller caches the data into a first memory. Next, the first controller mirrors the data to the alternate controller, such that the alternate controller copies the data into a second memory. The data in the first memory is linked to the data in the second memory, which enables a controller performing a cache data mirror operation to not have to ask an alternate controller for a location, in the alternate controller's memory, to transfer the data into. The multiple cache data mirror operations to a particular cache line, are coalesced into a single cache data mirror operation. (See Loechel at col. 3, ll. 5-50.)

Claim 3, as amended, of the present application recites:

A method comprising:
reading data from a first dirty cache line in a cache memory;
determining if the data is corrupt;
marking the first dirty cache line invalid if the data is corrupt;
determining if a duplicate cache line exists;
determining if the data within the duplicate cache line is corrupt if the duplicate cache line exists;
writing the data within the duplicate cache line to a first location in memory if the duplicate cache line is not corrupt; and
marking the first dirty cache line available.

Applicant submits that Loechel does not disclose or suggest determining if the data within a duplicate cache line is corrupt and writing the data within the duplicate cache line to a first location in memory if the duplicate cache line is not corrupt. The Examiner cites portions of Loechel as disclosing such features. (Final Office Action at page 3.) For example, the following portion is cited as disclosing the feature or determining if the data within the duplicate cache line is corrupt: "The valid map field 430 may include a bit map, in which each bit corresponds to a particular block in the

cache line 314 and identifies whether the block contains valid data.” (Loechel at col. 7, lns. 63-65.)

However, this cited portion does not disclose the feature of determining whether or not data within a duplicate cache line is corrupt. Nowhere in Loechel is there disclosed the feature of particularly examining a duplicate cache line to find whether or not the data is corrupt. Although a bit that indicates whether data is valid may be disclosed, this is not the same as determining whether data in a duplicate cache line is corrupt.

Furthermore, the Examiner cites the following portion of Loechel as disclosing the feature of writing the data within the duplicate cache line to a first location in memory if the duplicate cache line is not corrupt: “the cache is flushed...[t]hat is, data in the cache is written to the persistent memory.” (Col. 9, lns. 25-27.) This cited portion does not disclose or suggest writing the data within the duplicate cache line to a first location in memory if the duplicate cache line is not corrupt. Although the cited portion may suggest that data in a cache can be written to memory, it does not disclose or suggest writing data in a duplicate cache line to memory if the duplicate cache line is not corrupt. Therefore, claim 3 is patentable over Loechel.

Claims 4-7 and 12 depend from claim 3 and include additional limitations. Therefore, claims 4-7 and 12 are also patentable over Loechel.

Claim 8 recites determining if the data within a duplicate cache line is corrupt and writing the data within the duplicate cache line to a first location in memory if the duplicate cache line is not corrupt. For the reasons described above with respect to claim 3, claim 8 is also patentable over Loechel. As claims 9-11 and 13 depend from claim 8 and include additional limitations, claims 9-11 and 13 are also patentable over Loechel.

Claim 20 recites a cache controller to write data to a first location in a main memory device if the duplicate cache is not corrupt. Thus, for the reasons described above with respect to claim 3, claim 20 is also patentable over Loechel. As claims 21 and 22 depend from claim 20 and include additional limitations, claims 21 and 22 are also patentable over Loechel.

35 U.S.C. §103(a) Rejection

Claim 11 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Loechel (U.S. Patent No. 5,895,485). Applicant submits that the present claim is patentable over Loechel.

Claim 11 depends from independent claim 3. Dependent claims necessarily include all of the limitations of their independent claims. As discussed above with respect to claim 3, Loechel does not disclose or suggest determining if the data within a duplicate cache line is corrupt and writing the data within the duplicate cache line to a first location in memory if the duplicate cache line is not corrupt. Nor are such features well known in the art. Therefore, any combination of Loechel and ordinary skill in the art do not disclose or suggest the features of claim 11. As such, claim 11 is patentable over Loechel.

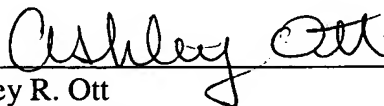
Applicant respectfully submits that the rejections have been overcome, and that the claims are in condition for allowance. Accordingly, applicant respectfully requests the rejections be withdrawn and the claims be allowed.

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,
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